Analytical Data Package Prepared For

Fluor Hanford Inc.

Radiochemical Analysis By

STL Richland

2800 G.W. Way, Richland Wa, 99352, (509)-375-3131.

Assigned Laboratory Code: STLRL

Data Package Contains 30 *Pages*

Report No.: 28647

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W04578A	F05-009	B1CF66	J5C040307-1	G5K032AC	9G5K0320	5109563

Certificate of Analysis

Fluor Hanford
P.O. Box 1000, T6-03
Richland, WA 99352

April 25, 2005

Attention: Steve Trent

SAF Number	:	F05-009
Date SDG Closed	:	March 7, 2005
Number of Samples	:	One (1)
Sample Type	:	Soil
SDG Number	:	W04578A
Data Deliverable	:	7-Day / 15-Day Summary

CASE NARRATIVE

I. Introduction

A request was received to reanalyze the sample for technetium. The sample was assigned the following laboratory ID number to correspond with the Fluor Hanford (FH) specific ID:

FH ID#	STLR ID#	MATRIX	DATE OF RECEIPT
B1CF66	G5K03	SOIL	3/4/05

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in. The Total Uranium analysis was cancelled for this SAF on 3/4/05 per Steve Trent.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analysis was: **Liquid Scintillation Counting**
Technetium-99 by method RICH-RC-5078

IV. Quality Control

The analytical results for each analysis performed under SDG W04578A includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Liquid Scintillation Counting
Technetium-99 by method RICH-RC-5078:
The sample was reanalyzed in attempt to achieve the required MDA. The achieved sample MDA was acceptable. The LCS recovery was low at 69%. The data are accepted based on the matrix spike recovery and the sample result confirmation between the two analytical batches. Except as noted, the LCS, batch blank, sample and sample matrix spike (B1CF66) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

for Becky Warrington
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**STL Richland's SOP number**
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/vn), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) *u_c - Combined Uncertainty.*	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, *u_c the combined uncertainty*. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

STL Richland STLRL

Ordered by Method, Batch No., Client Sample ID.

Date: 25-Apr-05

Report No. : 28647 **SDG No:** W04578A

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RPD
5109563 TC99_ETVDSK_LSC									
B1CF66									
	G5K032AC	TC-99	5.75E-02 +- 3.83E-01	U	pCi/g	100%	6.58E-01	1.50E+01	

No. of Results: 1

STL Richland

rptSTLRchSaSummary2 V4.12 A97

RPD - Relative Percent Difference.

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

QC Results Summary
STL Richland STLRL

Ordered by Method, Batch No, QC Type,.

Date: 25-Apr-05

Report No. : 28647 **SDG No.:** W04578A

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC|MDA
TC99_ETVDSK_LSC								
5109563 MATRIX SPIKE								
G5K032AH	TC-99	1.61E+02 +- 9.41E+00		pCi/g	100%	71%	-0.3	6.56E-01
5109563 BLANK QC								
G8N351AA	TC-99	3.49E-02 +- 3.82E-01	U	pCi/g	100%			6.61E-01
5109563 LCS								
G8N351AC	TC-99	1.57E+02 +- 9.18E+00		pCi/g	100%	69%	-0.3	6.53E-01

No. of Results: 3

Bias - (Result/Expected)-1 as defined by ANSI N13.30.

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 25-Apr-05

Lab Name: STL Richland | **SDG:** W04578A | **Collection Date:** 3/4/2005 8:20:00 AM

Lot-Sample No.: J5C040307-1 | **Report No. :** 28647 | **Received Date:** 3/4/2005 12:55:00 PM

Client Sample ID: B1CF66 | **COC No. :** F05-009-080 | **Matrix:** SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5109563	TC99_ETVDSK_LSC			**Work Order:** G5K032AC			**Report DB ID:** 9G5K0320					
TC-99	5.75E-02	U	2.73E-01	3.83E-01	6.58E-01	pCi/g	100%	*0.09*	4/22/05 11:03 p		2.0	LSC6
						3.17E-01	1.50E+01	*0.3*			G	

No. of Results: 1 **Comments:**

08

STL Richland

rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

BLANK RESULTS

Date: 25-Apr-05

Lab Name: STL Richland **SDG:** W04578A

Matrix: SOIL **Report No. :** 28647

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5109563	TC99_ETVDSK_LSC			**Work Order:** G8N351AA		**Report DB ID:** G8N351AB						
TC-99	3.49E-02	U	2.73E-01	3.82E-01	6.61E-01	pCi/g	100%	0.05	4/23/05 01:07 a		2.0	LSC6
					3.18E-01	2.00E+01		0.18			G	

No. of Results: 1 **Comments:**

60

STL Richland
rptSTLRchBlank
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 25-Apr-05

LCS RESULTS

Lab Name: STL Richland **SDG:** W04578A

Matrix: SOIL **Report No. :** 28647

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 5109563	TC99_ETVDSK_LSC			**Work Order:** G8N351AC			**Report DB ID:** G8N351CS						
TC-99	1.57E+02		1.72E+00	9.18E+00	6.53E-01	pCi/g	100%	2.26E+02	2.86E+00	69%	4/23/05 02:09 a	2.0	LSC6
							Rec Limits:	70	130	-0.3		G	

No. of Results: 1 **Comments:**

LCS

FORM II

MATRIX SPIKE RESULTS

Date: 25-Apr-05

Lab Name: STL Richland **SDG:** W04578A

Lot-Sample No.: J5C040307-1 **Report No. :** 28647 **Matrix:** SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Exp-ected	Exp Uncert	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 5109563	TC99_ETVDSK_LSC			**Work Order:** G5K032AH			**Report DB ID:** G5K032HW			**Orig Sa DB ID:**	9G5K0320		
TC-99	1.61E+02		1.74E+00	9.41E+00	6.56E-01	pCi/g	100%	70.72%	2.27E+02	1.88E+0(	4/23/05 12:05 a	2.0	LSC6
	5.75E-02	RPD	34.1									G	

No. of Results: 1 **Comments:**

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rptSTLRchMs
V4.12 A97

RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
Bias - (Result/Expected)-1 as defined by ANSI N13.30.

SEVERN TRENT STL

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

4/25/2005 12:21:50 PM

Lot No., Due Date: J5C040307; 03/18/2005

Client, Site: 108302; FLUOR- SOILS Hanford Site

QC Batch No., Method Test: 5109563; RTC99 Tc-99 by LSC

SDG, Matrix: W04578; SOIL

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?		✓	
3.3 Are the MS/MSD results, yields, and MDA within contract limits?	✓		
3.4 Are the duplicate result, yields, and MDAs within contract limits?			✓
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?	✓		
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?	✓		
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

1 The sample was rerun with a larger aliquot to meet CRDL.

2 The rerun has an LCS of 69%. The matrix spike is 71%. Client says to report. 10-056 11

First Level Review Pam Anderson **Date** 4-25-05

SEVERN TRENT STL

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

QC Batch Number: 5109563

Review Item	Yes (√)	No (√)	N/A (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery with contract acceptance criteria?		✓	
7. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
8. Do the MS/MSD results and yields meet acceptance criteria?	✓		
9. Do the duplicate sample results and yields meet acceptance criteria?			✓
C. Other 1. Are all Nonconformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: See NCM

Second Level Review: Jodie Date: 4/25/05

Clouseau
Nonconformance Memo

SEVERN TRENT SERVICES

NCM #: **10-05611**
NCM Initiated By: Pam Anderson
Date Opened: 04/25/2005
Date Closed:

Classification: **Anomaly**
Status: **GLREVIEW**
Production Area: Environmental - Sep
Tests: Tc-99 by LSC
Lot #'s (Sample #'s): J5C040307 (1), J5D190000 (563),
QC Batches: 5109563

Nonconformance: LCS result out of limits
Subcategory: Analyte was recovered low in the LCS

Problem Description / Root Cause

Name	Date	Description
Pam Anderson	04/25/2005	1 The sample was rerun with a larger aliquot to meet CRDL. CRDL is met. 2 On the rerun batch the LCS is low a t 69% recovery. The matrix spike has a 71% recovery. The sample is far below CRDL. Client says to report.

Corrective Action

Name	Date	Corrective Action
Pam Anderson	04/25/2005	Sample was reanalyzed.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F05-009-080	PAGE 1 OF 1

COLLECTOR POPE/PFISTER/MOKLER/TYRA	**COMPANY CONTACT** JACKSON, RL **TELEPHONE NO.** 372-9004	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8B **DATA TURNAROUND** 7 Days / 15 Days
SAMPLING LOCATION 216-U-8 ; ~~C47H6~~ C4722 44ft-46ft	**PROJECT DESIGNATION** U Plant Closure Contaminant Plume Refinement	**SAF NO.** F05-009	**AIR QUALITY** ☐
ICE CHEST NO. ~~98-3-4-05~~ Q-50639	**FIELD LOGBOOK NO.** HNF-N-439 1 **COA** 119141ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Severn Trent Incorporated, Richland	**OFFSITE PROPERTY NO.** N/A	**BILL OF LADING/AIR BILL NO.** N/A	

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
J5C040307
SDG# W045~~69~~ 78 3/4/05
Due 3/11/05

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
TYPE OF CONTAINER	aG
NO. OF CONTAINER(S)	1
VOLUME	60mL
SAMPLE ANALYSIS	Isotopic Uranium; Technetium-99; Total Uranium;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1CF66	SOIL	3/4/05	0820	X	GSK03							

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Pope / J Pfister 3-4-05	1255	[signature] / A. Rhinehart	3/04/05

SPECIAL INSTRUCTIONS
** The STL-RL laboratory is to achieve a detection limit of 1 pCi/gm for Tc-99.
** The STL laboratories will close SDGs upon accumulation of 5 samples or at a minimum weekly.

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(03/03)

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 3/04/05 @ 12:55 am

Client: FLH SDG #: W04569 NA [ ] SAF #: F05-009 NA [ ]

Work Order Number: VSC040307 Chain of Custody # F05-009-080

Shipping Container ID: NA Air Bill # NA

1. Custody Seals on shipping container intact? NA [ ] Yes [X] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [X] No [ ]
3. Chain of Custody record present? Yes [X] No [ ]
4. Cooler temperature: _____ NA [X] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [X]
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA [X] Yes [ ] No [ ]
8. Samples have:
   - _____ tape
   - [X] custody seals
   - _____ hazard labels
   - [X] appropriate samples labels
9. Samples are:
   - _____ in good condition
   - _____ broken
   - _____ leaking
   - _____ have air bubbles

   (Only for samples requiring head space)
10. Sample pH taken? NA [X] pH<2 [ ] pH>2 [ ] pH>9 [ ]
11. Sample Location, Sample Collector Listed? * Yes [ ] No [X]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [X]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: Andrew J Rickard Date: 3/04/05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, 9/03, Rev. 5

SEVERN TRENT STL

*** RE-ANALYSIS REQUEST ***

DUE DATE 4/25/05

CUSTOMER FLH

ANALYSIS Tc99

MATRIX Soil

LOT NUMBER J5C040307

SAMPLE DELIVERY GROUP W04578

OLD BATCH NUMBER 5064497

NEW BATCH NUMBER 5109503

LAB SAMPLE ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) G5K031AC	Reanalyze sample and matrix spike (no dup needed). Use 2g sample size to achieve RDL=1pCi/g.
2) G5K031AH	
3)	
4)	
5)	
6)	Use 2g.
7)	
8)	
9)	
10)	JW 4/19/05
11)	
12)	
13)	
14)	
15)	
16)	
17)	
18)	
19)	
20)	
LAB QC ID	Assigned with new batch.

4/20/2005 1:58:10 PM

Sample Preparation/Analysis

Balance Id:n/a

108302, FLUOR HANFORD IC , Flour
Hanford Inc

AN Tc-99 Prp/SepRC5013/5078
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Pipet #: _____

Report Due: 03/18/2005

Sep1 DT/Tm Tech:

Batch: 5109563 SOIL pCi/g PM, Quote: BG2, 50639

SEQ Batch, Test: None All Tests: 5066493 KWSR, 5066497 ANS5, 5066499 88OV, 5109563 ANS5,

Sep2 DT/Tm Tech:

Prep Tech: ,FinchA

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 G5K03-2-AC J5C040307-1-SAMP 03/04/2005 08:20		2.00g,in AmtRec: 60MLG	 #Containers: 1				Scr Rst: Alpha: 2.63E+03 pCi/g	Beta: 7.90E+02 pCi/g
2 G5K03-2-AH-S J5C040307-1-MS 03/04/2005 08:20		2.00g,in AmtRec: 60MLG	TCSG0987 03/07/05,pd 02/15/05,r #Containers: 1				Scr Rst: Alpha: 2.63E+03 pCi/g	Beta: 7.90E+02 pCi/g
3 G8N35-1-AA-B J5D190000-563-BLK 03/04/2005 08:20		2.00g,in AmtRec:	 #Containers: 1				Scr Rst: Alpha:	Beta:
4 G8N35-1-AC-C J5D190000-563-LCS 03/04/2005 08:20		2.00g,in AmtRec:	TCSG0997 03/07/05,pd 02/15/05,r #Containers: 1				Scr Rst: Alpha:	Beta:
5 G8N35-1-AD-BN J5D190000-563-IBLK 03/04/2005 08:20		 AmtRec:	 #Containers: 1				Scr Rst: Alpha:	Beta:

Comments:

All Clients for Batch:
108302, FLUOR HANFORD IC Flour Hanford Inc , BG2, 50639

G5K032AC-SAMP Constituent List:
Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35

Sample Preparation/Analysis

AN Tc-99 Prp/SepRC5013/5078
S5 Technetium-99 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:

Pipet #: _____

Report Due: 03/18/2005

Sep1 DT/Tm Tech:

Batch: 5109563 **pCi/g**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

G5K032AH-MS Constituent List:

G8N351AA-BLK:
Tc-99 RDL:15 pCi/g LCL: UCL: RPD:
G8N351AC-LCS:
Tc-99 RDL:15 pCi/g LCL:70 UCL:130 RPD:35
G8N351AD-IBLK:
Tc-99 RDL:15 pCi/g LCL: UCL: RPD:

G5K032AC-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
G5K032AH-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
G8N351AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
G8N351AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
G8N351AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By _____ Date: _____

ICOC Fraction Transfer/Status Report

ByDate: 4/25/2004, 4/30/2005, Batch: '5109563', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
5109563							
AC			**CalcC**	**FinchA**	4/20/2005 1:56:24 PM		
SC				ricel	IsBatched	4/19/2005 5:05:46 PM	ICOC_RADCALC v4.8.08
SC				FinchA	InPrep	4/20/2005 1:56:24 PM	RICH-RC-5078 Revision 2
SC				FinchA	InSep1	4/20/2005 3:51:28 PM	RICH-RC-5078 REVISION 2
SC				FinchA	Sep1C	4/22/2005 3:51:08 PM	RICH-RC-5078 REVISION 2
SC				DAWKINSO	InCnt1	4/22/2005 4:13:59 PM	RICH-RD-0001 REVISION 3
SC				StringerR	CalcC	4/24/2005 1:55:17 PM	RICH-RD-0001 REVISION 3
AC				**FinchA**	4/20/2005 3:51:28 PM		
AC				**FinchA**	4/22/2005 3:51:08 PM		
AC				**DAWKINSO**	4/22/2005 4:13:59 PM		
AC				**StringerR**	4/24/2005 1:55:17 PM		

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AC: Accepting Entry; SC: Status Change